



STIC Search Report

EIC 1700

STIC Database Tracking Number: 211329

TO: John Chu
Location: Remsen 9d51
Art Unit : 1752
January 3, 2007
Phone: 571-272-1329
Serial Number: 10 / 533936

From: Jan Delaval
Location: EIC 1700
Remsen 4a30
Phone: 571-272-2504

jan.delaval@uspto.gov

Search Notes

Banks, Kendra

211329

From: JOHN CHU [john.chu@uspto.gov]
Sent: Tuesday, December 26, 2006 1:41 PM
To: STIC-EIC1700
Subject: Database Search Request, Serial Number: 10533936

Requester:
JOHN CHU (P/1752)
Art Unit:
GROUP ART UNIT 1752
Employee Number:
68314
Office Location:
REM 09D51
Phone Number:
(571) 272-1329
Mailbox Number:

SCIENTIFIC REFERENCE BR
Sci & Tech Inf. Ctr
DEC 26 RECD
Pat. & T.M. Office

Case serial number:
10533936
Class / Subclass(es):
430/270.1
Earliest Priority Filing Date:
11/04/02
Format preferred for results:
Paper
Search Topic Information:
Please search the compound in claim 1 and the process of preparing said compound in claim 2.

Also search the polymer and a process of making said polymer, which is made from the compound of claim 1.

The copolymer is then used in a photosensitive composition which also needs to be searched.

Thank you!
John

Note: the Class/subclass of 430/270.1 above is for the photosensitive composition.
Special Instructions and Other Comments:

Jan
1/3/07

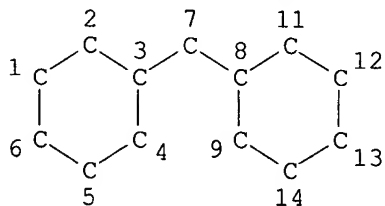
FILE 'REGISTRY' ENTERED AT 07:11:42 ON 03 JAN 2007
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STRUCTURE FILE UPDATES:      2 JAN 2007  HIGHEST RN 916646-22-5
DICTIONARY FILE UPDATES:    2 JAN 2007  HIGHEST RN 916646-22-5
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TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

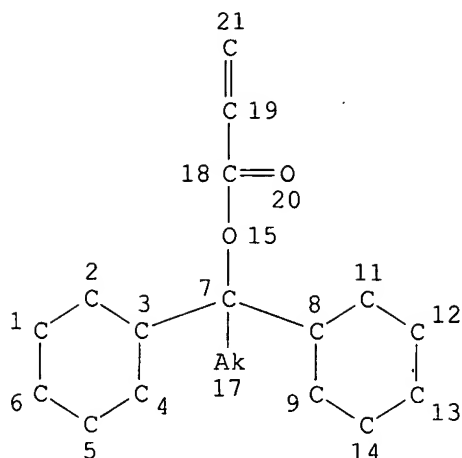
REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

L28 STR



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RSPEC      4      8
NUMBER OF  NODES IS 13
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L30      14086 SEA FILE=REGISTRY SSS FUL L28
L32      STR
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NODE ATTRIBUTES:
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 DEFAULT ECLEVEL IS LIMITED

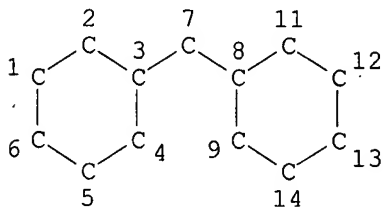
GRAPH ATTRIBUTES:
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STEREO ATTRIBUTES: NONE
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100.0% PROCESSED 230 ITERATIONS
 SEARCH TIME: 00.00.01

11 ANSWERS

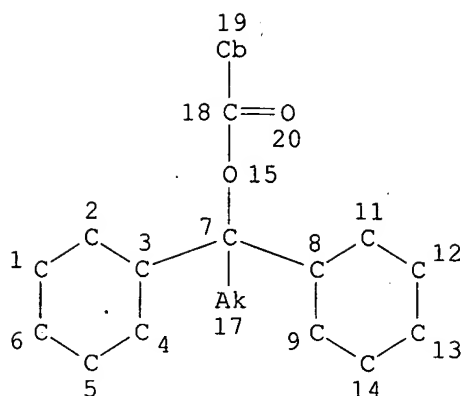
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 L28 STR



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GRAPH ATTRIBUTES:
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STEREO ATTRIBUTES: NONE
 L30 14086 SEA FILE=REGISTRY SSS FUL L28
 L37 STR



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 DEFAULT ECLEVEL IS LIMITED

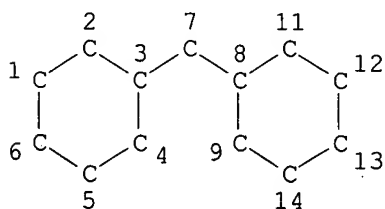
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STEREO ATTRIBUTES: NONE
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10 ANSWERS

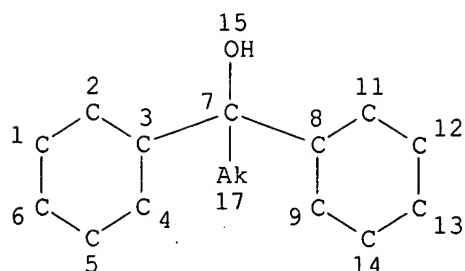
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 L28 STR



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STEREO ATTRIBUTES: NONE
 L30 14086 SEA FILE=REGISTRY SSS FUL L28
 L50 STR



NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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 NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE
 L53 23 SEA FILE=REGISTRY SUB=L30 CSS FUL L50

100.0% PROCESSED 3223 ITERATIONS
 SEARCH TIME: 00.00.01

23 ANSWERS

=> d his

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 SET COST OFF

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L2	2 S E3
	E SON E/AU
L3	14 S E47
	E SON EUNK/AU
	E SON NAME/AU
L4	17 S E4
	E EUN/AU
	E KANG/AU
L5	8 S E3
	E KANG J/AU
L6	1171 S E3,E11,E12
	E KANG JAE/AU
L7	2 S E3
L8	10 S E21
	E KANG JAEH/AU
L9	2 S E5
	E KANG NAME/AU
L10	17 S E4
	E JAE/AU
L11	1 S E65
	E JAEH/AU
	E JAE NAME/AU
L12	1 S E4

L13 45 E KIM/AU
 45 S E3
 E KIM D/AU
 L14 634 S E3,E6
 E KIM DEOG/AU
 L15 34 S E4
 E KIM DEOGB/AU
 L16 7 S E4
 E KIM NAME/AU
 L17 343 S E4
 E KIM J/AU
 L18 948 S E3
 L19 1705 S E14-E18
 E KIM JAE/AU
 L20 16 S E3
 L21 46 S E75
 L22 285 S E111
 E KIM JAEH/AU
 L23 56 S E18
 E DEOG/AU
 E DONGJIN/PA,CS
 L24 165 S E29-E35
 L25 194 S E3,E4
 E DONG JIN/PA,CS
 L26 16 S E5-E41
 SEL RN L1

FILE 'REGISTRY' ENTERED AT 06:56:03 ON 03 JAN 2007

L27 26 S E1-E26
 L28 STR
 L29 50 S L28
 L30 14086 S L28 FUL
 SAV TEMP L30 CHU533/A
 L31 140 S L30 AND 103.10/RID
 L32 STR L28
 L33 0 S L32 SAM SUB=L30
 L34 11 S L32 FUL SUB=L30
 SAV L34 CHU533A/A
 L35 2 S L34 NOT L27
 L36 11 S L34,L35
 L37 STR L32
 L38 0 S L37 SAM SUB=L31
 L39 0 S L37 SAM SUB=L30
 L40 10 S L37 FUL SUB=L30
 SAV L40 CHU533B/A
 L41 10 S L40 AND L31
 L42 21 S L36,L41
 SAV L42 CHU533C/A
 L43 124 S L31 NOT L42

FILE 'HCAOLD'. ENTERED AT 07:06:27 ON 03 JAN 2007

L44 0 S L42

FILE 'HCAPLUS' ENTERED AT 07:06:31 ON 03 JAN 2007

L45 2 S L42
 L46 1 S L45 AND L1-L26
 L47 2 S L45,L46

FILE 'REGISTRY' ENTERED AT 07:07:43 ON 03 JAN 2007

L48 3 S L27 AND CL/ELS

L49 2 S L48 NOT MG/ELS
L50 STR L32
L51 13 S L50 SAM SUB=L30
L52 3 S L50 CSS SAM SUB=L30
L53 23 S L50 CSS FUL SUB=L30
SAV L53 CHU533D/A

FILE 'HCAPLUS' ENTERED AT 07:09:58 ON 03 JAN 2007

L54 8470 S L49
L55 27 S L53
L56 1 S L54 AND L55
L57 2 S L47,L56
SEL RN L57 2

FILE 'REGISTRY' ENTERED AT 07:10:28 ON 03 JAN 2007

L58 61 S E27-E87.

FILE 'USPATFULL' ENTERED AT 07:11:13 ON 03 JAN 2007

L59 1 S L42

FILE 'HCAPLUS, USPATFULL' ENTERED AT 07:11:30 ON 03 JAN 2007

L60 3 DUP REM L57 L59 (0 DUPLICATES REMOVED)

FILE 'REGISTRY' ENTERED AT 07:11:42 ON 03 JAN 2007

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 07:12:29 ON 03 JAN 2007

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FILE COVERS 1907 - 3 Jan 2007 VOL 146 ISS 2

FILE LAST UPDATED: 2 Jan 2007 (20070102/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l57 all hitstr retable tot

L57 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:413153 HCAPLUS

DN 140:431398

ED Entered STN: 21 May 2004

TI Chemically amplified polymer having pendant group with dicyclohexyl for photoresist composition

IN Son, Eun-Kyung; Kang, Jae-Hyun; Kim, Deog-Bae
; Kim, Jae-Hyun

PA Dongjin Semichem Co., Ltd., S. Korea
 SO PCT Int. Appl., 34 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM G03F0007-039
 ICS G03F0007-027
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 35, 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2004042477	A1	20040521	WO 2002-KR2157	20021119 <--	
	W:			AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW		
	RW:			GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG		
	KR 2004039731	A	20040512	KR 2002-67882	20021104 <--	
	AU 2002368319	A1	20040607	AU 2002-368319	20021119 <--	
	TW 242003	B	20051021	TW 2002-91136589	20021218 <--	
	US 2006019192	A1	20060126	US 2005-533936	20050504 <--	
PRAI	KR 2002-67882	A	20021104	<--		
	WO 2002-KR2157	W	20021119	<--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004042477	ICM	G03F0007-039
	ICS	G03F0007-027
	IPCI	G03F0007-039 [ICM,7]; G03F0007-027 [ICS,7]
	IPCR	C07C0067-00 [I,C*]; C07C0067-14 [I,A]; C07C0067-347 [I,A]; C07C0069-00 [I,C*]; C07C0069-54 [I,A]; C07C0069-753 [I,A]; C08F0220-00 [I,C*]; C08F0220-18 [I,A]; G03F0007-039 [I,C*]; G03F0007-039 [I,A]
	ECLA	C07C067/14+69/54; C07C067/347+69/753; C07C069/54; C07C069/753; C08F220/18; G03F007/039C1; G03F007/039C1S
KR 2004039731	IPCI	G03F0007-027 [ICM,7]
	ECLA	C07C067/14+69/54; C07C067/347+69/753; C07C069/54; C07C069/753; C08F220/18; G03F007/039C1; G03F007/039C1S
AU 2002368319	IPCI	G03F0007-039 [ICM,7]; G03F0007-027 [ICS,7]
	IPCR	C07C0067-00 [I,C*]; C07C0067-14 [I,A]; C07C0067-347 [I,A]; C07C0069-00 [I,C*]; C07C0069-54 [I,A]; C07C0069-753 [I,A]; C08F0220-00 [I,C*]; C08F0220-18 [I,A]; G03F0007-039 [I,C*]; G03F0007-039 [I,A]
TW 242003	IPCI	C07C0069-653 [ICS,7]; C07C0069-00 [ICS,7,C*]; G03F0007-027 [ICS,7]
	IPCR	C07C0067-00 [I,C*]; C07C0069-00 [I,C*]; C08F0220-00 [I,C*]; G03F0007-039 [I,C*]; C07C0067-14 [I,A]; C07C0067-347 [I,A]; C07C0069-54 [I,A]; C07C0069-753 [I,A]; C08F0220-18 [I,A]; G03F0007-039 [I,A]
US 2006019192	IPCI	G03C0001-492 [I,A]; G03C0001-005 [I,C*]
	IPCR	G03C0001-005 [I,C]; G03C0001-492 [I,A]; C07C0067-00 [I,C*]; C07C0067-14 [I,A]; C07C0067-347 [I,A]; C07C0069-00 [I,C*]; C07C0069-54 [I,A]; C07C0069-753

[I,A]; C08F0220-00 [I,C*]; C08F0220-18 [I,A];
 G03F0007-039 [I,C*]; G03F0007-039 [I,A]
 NCL 430/270.100
 ECLA C07C067/14+69/54; C07C067/347+69/753; C07C069/54;
 C07C069/753; C08F220/18; G03F007/039C1; G03F007/039C1S

OS MARPAT 140:431398

AB The present invention relates to a chemical amplified polymer having a pendant group with dicyclohexyl bonded thereto, a process for the preparation thereof, and a resist composition comprising it, and more particularly, to a novel (meth)acrylic or norbornene carboxylate compound with dicyclohexyl bonded thereto, a process for the preparation thereof, a chemical amplified polymer synthesized therewith, and a pos. photoresist composition for ArF comprising said polymer, with high resolution and excellent etching resistance.

ST chem amplified polymer pendant dicyclohexyl photoresist compn

IT Photoresists

(chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)

IT 691390-42-8P 691390-43-9P 691390-44-0P

691390-45-1P 691390-46-2P 691390-48-4P

691390-49-5P 691390-50-8P 691390-51-9P

691390-52-0P 691390-53-1P 691390-54-2P

691390-55-3P 691390-56-4P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)

IT 75-16-1, Methyl magnesium bromide 119-60-8, Dicyclohexyl ketone

542-92-7, Cyclopentadiene, reactions 814-68-6, Acryloyl chloride

920-46-7, MethAcryloyl chloride 2386-64-3, Ethyl magnesium chloride

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)

IT 53317-13-8P 615567-79-8P 691390-37-1P

691390-39-3P 691390-40-6P 691390-41-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Fujitsu Limited; US 5968713 A 1999 HCAPLUS

(2) Nippon Zeon Co Ltd; JP 1996101509 A 1996

(3) Samsung Electronic Co Ltd; KR 200247866 A 2002

(4) Shipley Company; KR 200140033 A 2001

(5) Shipley Company; KR 200185567 A 2001

IT 691390-42-8P 691390-43-9P 691390-44-0P

691390-45-1P 691390-46-2P 691390-48-4P

691390-49-5P 691390-50-8P 691390-51-9P

691390-52-0P 691390-53-1P 691390-54-2P

691390-55-3P 691390-56-4P

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)

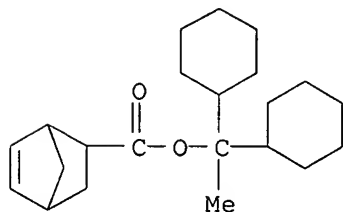
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CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester, polymer with 2,5-furandione (9CI) (CA INDEX NAME)

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CRN 691390-39-3

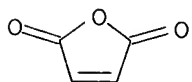
CMF C22 H34 O2



CM 2

CRN 108-31-6

CMF C4 H2 O3



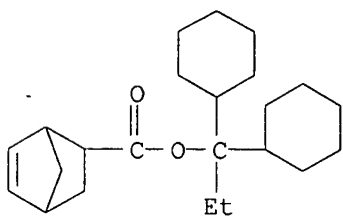
RN 691390-43-9 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester, polymer with 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 691390-41-7

CMF C23 H36 O2



CM 2

CRN 108-31-6

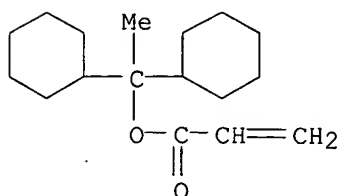
CMF C4 H2 O3



RN 691390-44-0 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, polymer with
1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX
NAME)

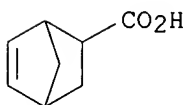
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CRN 691390-37-1
CMF C17 H28 O2



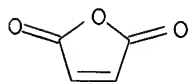
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CRN 120-74-1
CMF C8 H10 O2



CM 3

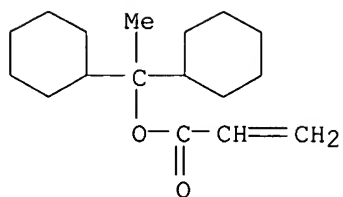
CRN 108-31-6
CMF C4 H2 O3



RN 691390-45-1 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-hydroxyethyl ester, polymer
with 1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA
INDEX NAME)

CM 1

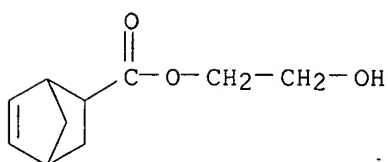
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CMF C17 H28 O2



CM 2

CRN 37503-42-7

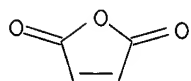
CMF C10 H14 O3



CM 3

CRN 108-31-6

CMF C4 H2 O3



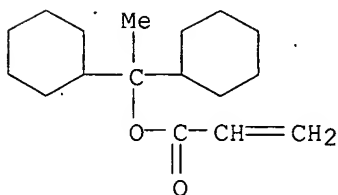
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CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, methyl ester, polymer with
1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX
NAME)

CM 1

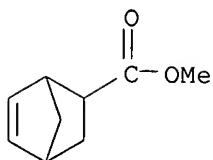
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CMF C17 H28 O2



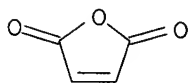
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CRN 6203-08-3
CMF C9 H12 O2



CM 3

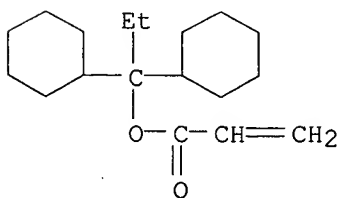
CRN 108-31-6
CMF C4 H2 O3



RN 691390-48-4 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, polymer with
1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX
NAME)

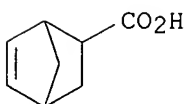
CM 1

CRN 691390-47-3
CMF C18 H30 O2



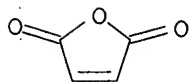
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CRN 120-74-1
CMF C8 H10 O2



CM 3

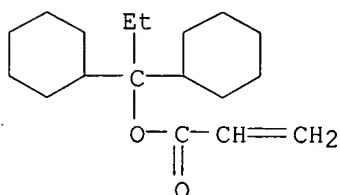
CRN 108-31-6
CMF C4 H2 O3



RN 691390-49-5 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-hydroxyethyl ester, polymer with 1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

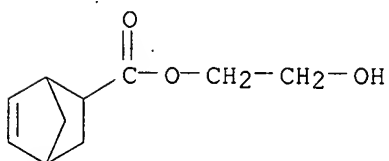
CM 1

CRN 691390-47-3
CMF C18 H30 O2



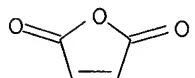
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CRN 37503-42-7
CMF C10 H14 O3



CM 3

CRN 108-31-6
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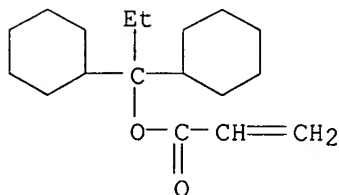


RN 691390-50-8 HCAPLUS
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, methyl ester, polymer with 1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 691390-47-3

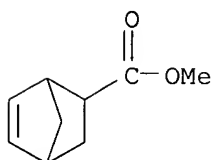
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CM 2

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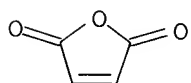
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CM 3

CRN 108-31-6

CMF C4 H2 O3



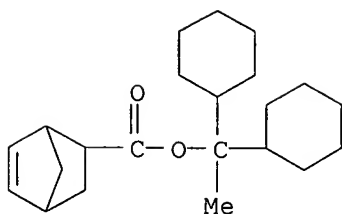
RN 691390-51-9 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester,
polymer with 2,5-furandione and 2-methyl-2-propenoic acid (9CI) (CA INDEX
NAME)

CM 1

CRN 691390-39-3

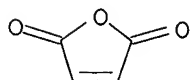
CMF C22 H34 O2



CM 2

CRN 108-31-6

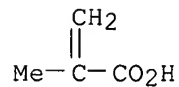
CMF C4 H2 O3



CM 3

CRN 79-41-4

CMF C4 H6 O2



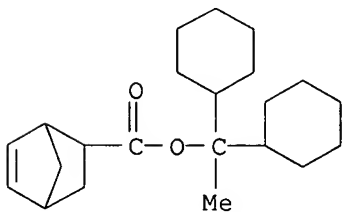
RN 691390-52-0 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester,
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(CA INDEX NAME)

CM 1

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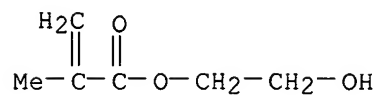
CMF C22 H34 O2



CM 2

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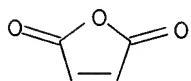
CMF C6 H10 O3



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CRN 108-31-6

CMF C4 H2 O3



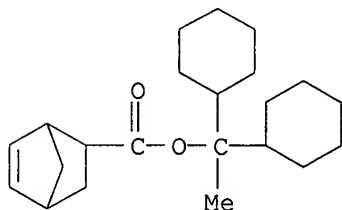
RN 691390-53-1 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester,
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INDEX NAME)

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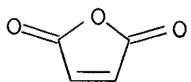
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CM 2

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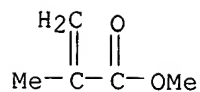
CMF C4 H2 O3



CM 3

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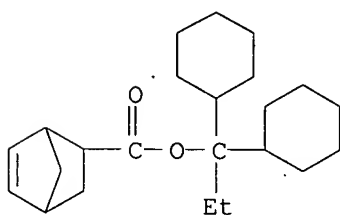
CMF C5 H8 O2



RN 691390-54-2 HCAPLUS
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester,
 polymer with 2,5-furandione and 2-methyl-2-propenoic acid (9CI) (CA INDEX
 NAME)

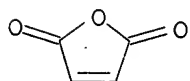
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CRN 691390-41-7
 CMF C23 H36 O2



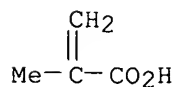
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CRN 108-31-6
 CMF C4 H2 O3



CM 3

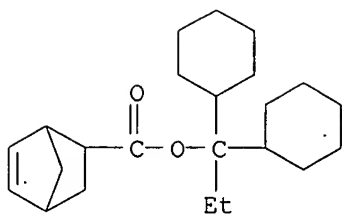
CRN 79-41-4
 CMF C4 H6 O2



RN 691390-55-3 HCAPLUS
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester,
 polymer with 2,5-furandione and 2-hydroxyethyl 2-methyl-2-propenoate (9CI)
 (CA INDEX NAME)

CM 1

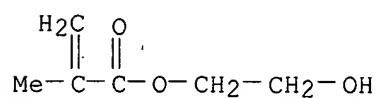
CRN 691390-41-7
 CMF C23 H36 O2



CM 2

CRN 868-77-9

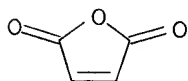
CMF C6 H10 O3



CM 3

CRN 108-31-6

CMF C4 H2 O3



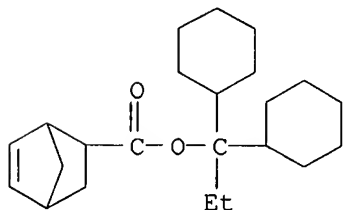
RN 691390-56-4 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester,
polymer with 2,5-furandione and methyl 2-methyl-2-propenoate (9CI) (CA
INDEX NAME)

CM 1

CRN 691390-41-7

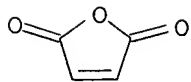
CMF C23 H36 O2



CM 2

CRN 108-31-6

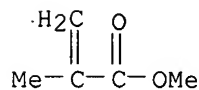
CMF C4 H2 O3



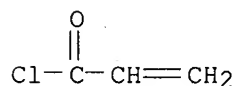
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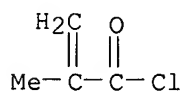
CMF C5 H8 O2



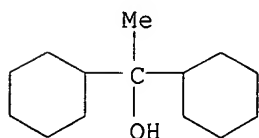
IT 814-68-6, Acryloyl chloride 920-46-7, MethAcryloyl chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)
 RN 814-68-6 HCAPLUS
 CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



RN 920-46-7 HCAPLUS
 CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)

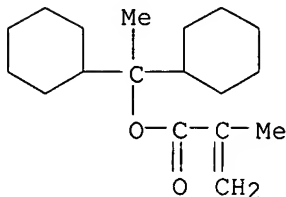


IT 53317-13-8P 615567-79-8P 691390-37-1P
 691390-39-3P 691390-40-6P 691390-41-7P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)
 RN 53317-13-8 HCAPLUS
 CN Cyclohexanemethanol, α-cyclohexyl-α-methyl- (9CI) (CA INDEX NAME)



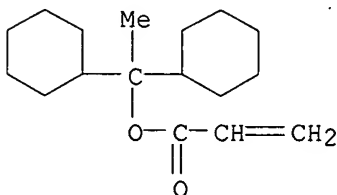
RN 615567-79-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dicyclohexylethyl ester (9CI) (CA INDEX NAME)



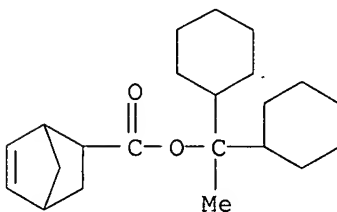
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CN 2-Propenoic acid, 1,1-dicyclohexylethyl ester (9CI) (CA INDEX NAME)



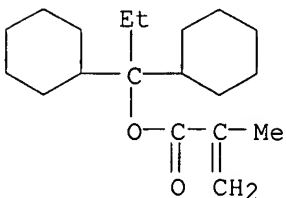
RN 691390-39-3 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester (9CI) (CA INDEX NAME)



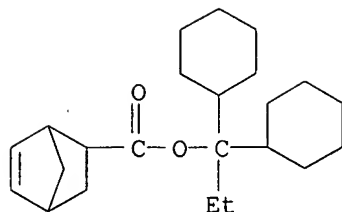
RN 691390-40-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dicyclohexylpropyl ester (9CI) (CA INDEX NAME)



RN 691390-41-7 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester (9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Fujitsu Limited	1999			US 5968713 A	HCAPLUS
Nippon Zeon Co Ltd	1996			JP 1996101509 A	
Samsung Electronic Co L	2002			KR 200247866 A	
Shipley Company	2001			KR 200140033 A	
Shipley Company	2001			KR 200185567 A	

L57 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:834253 HCAPLUS

DN 139:343474

ED Entered STN: 24 Oct 2003

TI Positive-working resist composition containing alkali soluble resin having (meth)acrylate repeating unit

IN Sato, Kenichiro; Kawabe, Yasumasa

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 73 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F0007-039

ICS C08F0220-00; C08F0232-00; G03F0007-004; H01L0021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

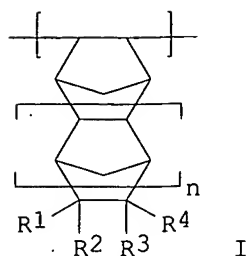
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003302762	A	20031024	JP 2002-109499	20020411
PRAI JP 2002-109499		20020411		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2003302762	ICM	G03F0007-039
	ICS	C08F0220-00; C08F0232-00; G03F0007-004; H01L0021-027
	IPCI	G03F0007-039 [ICM,7]; C08F0220-00 [ICS,7]; C08F0232-00 [ICS,7]; G03F0007-004 [ICS,7]; H01L0021-027 [ICS,7]; H01L0021-02 [ICS,7,C*]
	IPCR	C08F0220-00 [I,A]; C08F0220-00 [I,C*]; C08F0232-00 [I,A]; C08F0232-00 [I,C*]; G03F0007-004 [I,A]; G03F0007-004 [I,C*]; G03F0007-039 [I,A]; G03F0007-039 [I,C*]; H01L0021-02 [I,C*]; H01L0021-027 [I,A]

GI



AB The pos.-working resist composition used in a far-UV region comprises (A) a photoacid, (B) an alkali-soluble resin I (R1-4 = H, halo, cyano, COOH, etc.; and n = 0, 1), and (C) an alc. compound having a C7-15 alicyclic hydrocarbon group and an alc. OH group.

ST UV photoresist compn alkali soluble resin acrylate methacrylate; alc compd photoacid photoresist compn

IT Photoresists

(UV; pos.-working resist composition containing alkali soluble resin having (meth)acrylate repeating unit)

IT Photoresists

Resists

(pos.-working resist composition containing alkali soluble resin having (meth)acrylate repeating unit)

IT 707-37-9 768-95-6, Tricyclo[3.3.1.1³,7]decan-1-ol 770-71-8,
Tricyclo[3.3.1.1³,7]decan-1-methanol 775-64-4 4728-34-1 5240-72-2,
Bicyclo[2.2.1]heptane-2-methanol 6240-11-5, Tricyclo[3.3.1.1³,7]decan-1-
ethanol 10347-01-0 14440-78-9, Bicyclo[2.2.1]heptane-2,3-diol
14575-03-2 17071-62-4 20098-14-0 28132-01-6 61065-61-0
62978-80-7 67092-78-8 68435-07-4 92343-46-9 96314-52-2
99181-50-7, Tricyclo[3.3.1.1³,7]decan-1,3,5-triol 101725-90-0
135359-64-7 240417-26-9 436852-32-3 615568-01-9,
Bicyclo[2.2.1]heptane-1,4-diol 615584-35-5 615584-36-6

RL: TEM (Technical or engineered material use); USES (Uses)

(alc. compound; pos.-working resist composition containing alkali soluble

resin

having (meth)acrylate repeating unit)

IT 181020-29-1 569372-93-6 615567-19-6 615567-21-0 615567-22-1
615567-24-3 615567-27-6 615567-30-1 615567-34-5 615567-37-8
615567-39-0 615567-41-4 615567-44-7 615567-47-0 615567-49-2
615567-51-6 615567-53-8 615567-55-0 615567-58-3 615567-61-8
615567-63-0 615567-66-3 615567-68-5 615567-72-1 615567-75-4
615567-77-6 **615567-80-1**

RL: TEM (Technical or engineered material use); USES (Uses)

(alkali-soluble resin; pos.-working resist composition containing alkali

soluble resin

having (meth)acrylate repeating unit)

IT 144089-15-6 213740-84-2 241806-75-7 258872-05-8 284474-28-8
474510-73-1 615567-09-4

RL: TEM (Technical or engineered material use); USES (Uses)

(photoacid; pos.-working resist composition containing alkali soluble resin

having

(meth)acrylate repeating unit)

IT **615567-80-1**

RL: TEM (Technical or engineered material use); USES (Uses)

(alkali-soluble resin; pos.-working resist composition containing alkali

soluble resin

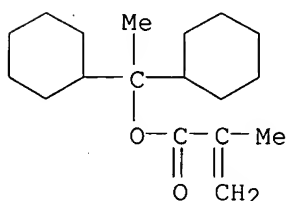
having (meth)acrylate repeating unit)

RN 615567-80-1 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, 1,1-dicyclohexylethyl ester, homopolymer
 (9CI) (CA INDEX NAME)

CM 1

CRN 615567-79-8

CMF C18 H30 O2



=> fil uspatful

FILE 'USPATFULL' ENTERED AT 07:12:52 ON 03 JAN 2007

CA INDEXING COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 2 Jan 2007 (20070102/PD)

FILE LAST UPDATED: 2 Jan 2007 (20070102/ED)

HIGHEST GRANTED PATENT NUMBER: US7159245

HIGHEST APPLICATION PUBLICATION NUMBER: US2006294631

CA INDEXING IS CURRENT THROUGH 2 Jan 2007 (20070102/UPCA)

ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 2 Jan 2007 (20070102/PD)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2006

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2006

=> d bib abs hitstr 159

L59 ANSWER 1 OF 1 USPATFULL on STN

AN 2006:21360 USPATFULL

TI Chemically amplified polymer having pendant group with dicyclohexyl and resist composition comprising the same

IN SON, Eun-Kyung, Hwaseong-city, KOREA, REPUBLIC OF
 Kang, Jae-Hyun, Hwaseong-city, KOREA, REPUBLIC OF
 Kim, Deog-Bae, Hwaseong-city, KOREA, REPUBLIC OF
 Kim, Jae-Hyun, Hwaseong-city, KOREA, REPUBLIC OF

PI US 2006019192 A1 20060126

AI US 2003-533936 A1 20021119 (10)

WO 2002-KR2157 20021119

20050504 PCT 371 date

PRAI KR 2002-67882 20021104

DT Utility

FS APPLICATION

LREP FISH & RICHARDSON PC, P.O. BOX 1022, MINNEAPOLIS, MN, 55440-1022, US

CLMN Number of Claims: 16

ECL Exemplary Claim: 1

DRWN 2 Drawing Page(s)

LN.CNT 583

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a chemically amplified polymer having a pendent group with dicyclohexyl bonded thereto, a process for the

preparation thereof, and a resist composition comprising it, and more particularly, to a novel (meth)acrylic or norbornene carboxylate compound with dicyclohexyl bonded thereto, a process for the preparation thereof, a chemically amplified polymer synthesized therewith, and a positive photoresist composition for ArF comprising said polymer, with high resolution and excellent etching resistance.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 691390-42-8P 691390-43-9P 691390-44-0P

691390-45-1P 691390-46-2P 691390-48-4P

691390-49-5P 691390-50-8P 691390-51-9P

691390-52-0P 691390-53-1P 691390-54-2P

691390-55-3P 691390-56-4P

(chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)

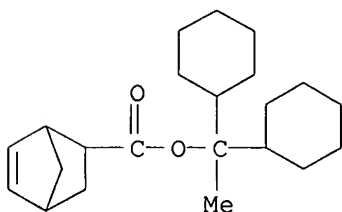
RN 691390-42-8 USPTAFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester, polymer with 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 691390-39-3

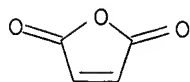
CMF C22 H34 O2



CM 2

CRN 108-31-6

CMF C4 H2 O3



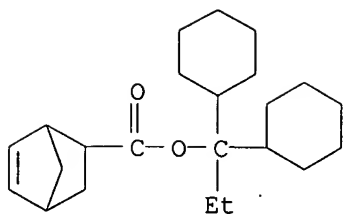
RN 691390-43-9 USPTAFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester, polymer with 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 691390-41-7

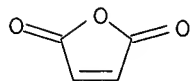
CMF C23 H36 O2



CM 2

CRN 108-31-6

CMF C4 H2 O3



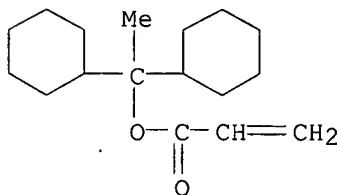
RN 691390-44-0 USPATFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, polymer with
1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX
NAME)

CM 1

CRN 691390-37-1

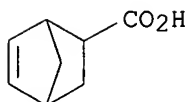
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CM 2

CRN 120-74-1

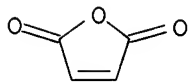
CMF C8 H10 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



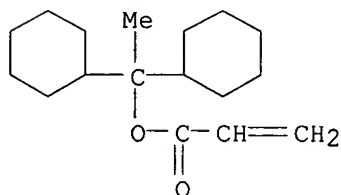
RN 691390-45-1 USPATFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-hydroxyethyl ester, polymer
with 1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA
INDEX NAME)

CM 1

CRN 691390-37-1

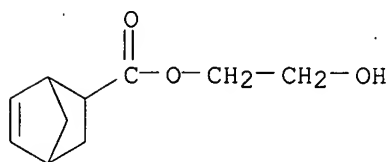
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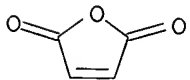
CMF C10 H14 O3



CM 3

CRN 108-31-6

CMF C4 H2 O3



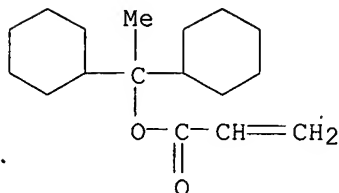
RN 691390-46-2 USPATFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, methyl ester, polymer with
1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX
NAME)

CM 1

CRN 691390-37-1

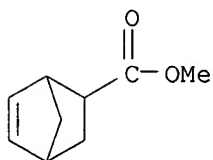
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CM 2

CRN 6203-08-3

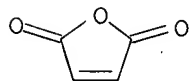
CMF C9 H12 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



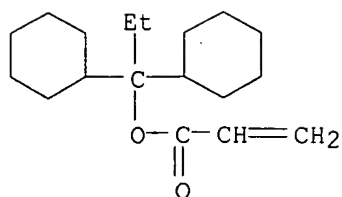
RN 691390-48-4 .USPATFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, polymer with
1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX
NAME)

CM 1

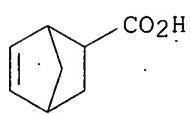
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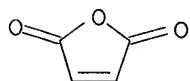
CM 2

CRN 120-74-1
CMF C8 H10 O2



CM 3

CRN 108-31-6
CMF C4 H2 O3

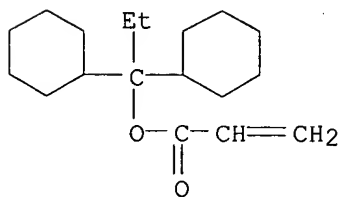


RN 691390-49-5 USPATFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-hydroxyethyl ester, polymer
with 1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA
INDEX NAME)

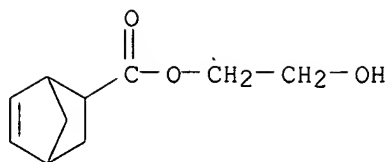
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CRN 691390-47-3
CMF C18 H30 O2



CM 2

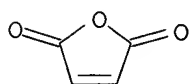
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CM 3

CRN 108-31-6

CMF C4 H2 O3



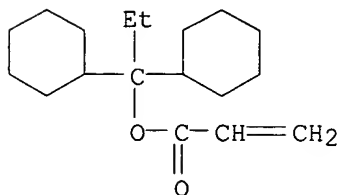
RN 691390-50-8 USPATFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, methyl ester, polymer with
1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX
NAME)

CM 1

CRN 691390-47-3

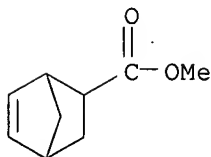
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CM 2

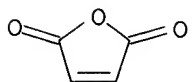
CRN 6203-08-3

CMF C9 H12 O2



CM 3

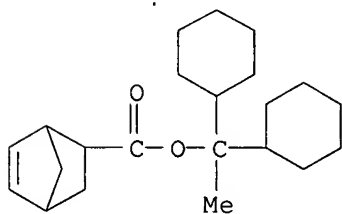
CRN 108-31-6
CMF C4 H2 O3



RN 691390-51-9 USPATFULL
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester,
polymer with 2,5-furandione and 2-methyl-2-propenoic acid (9CI) (CA
INDEX NAME)

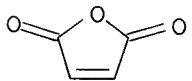
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CRN 691390-39-3
CMF C22 H34 O2



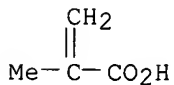
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CRN 108-31-6
CMF C4 H2 O3



CM 3

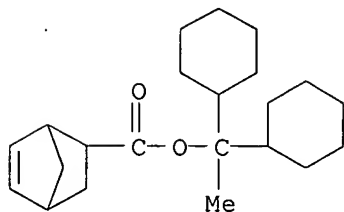
CRN 79-41-4
CMF C4 H6 O2



RN 691390-52-0 USPATFULL
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester,
polymer with 2,5-furandione and 2-hydroxyethyl 2-methyl-2-propenoate
(9CI) (CA INDEX NAME)

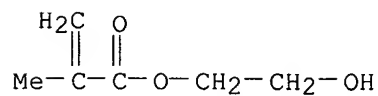
CM 1

CRN 691390-39-3
CMF C22 H34 O2



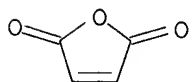
CM 2

CRN 868-77-9
CMF C6 H10 O3



CM 3

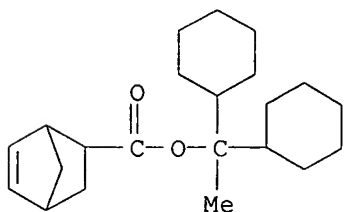
CRN 108-31-6
CMF C4 H2 O3



RN 691390-53-1 USPATFULL
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester,
polymer with 2,5-furandione and methyl 2-methyl-2-propenoate (9CI) (CA
INDEX NAME)

CM 1

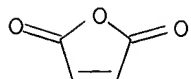
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CM 2

CRN 108-31-6

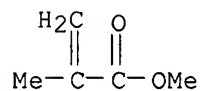
CMF C4 H2 O3



CM 3

CRN 80-62-6

CMF C5 H8 O2



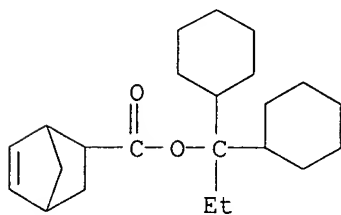
RN 691390-54-2 USPATFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester,
polymer with 2,5-furandione and 2-methyl-2-propenoic acid (9CI) (CA
INDEX NAME)

CM 1

CRN 691390-41-7

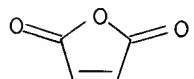
CMF C23 H36 O2



CM 2

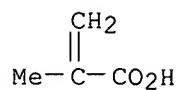
CRN 108-31-6

CMF C4 H2 O3



CM 3

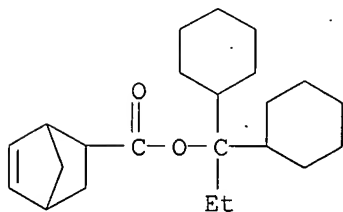
CRN 79-41-4
CMF C4 H6 O2



RN 691390-55-3 USPATFULL
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester, polymer with 2,5-furandione and 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

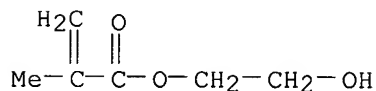
CM 1

CRN 691390-41-7
CMF C23 H36 O2



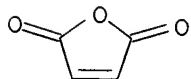
CM 2

CRN 868-77-9
CMF C6 H10 O3



CM 3

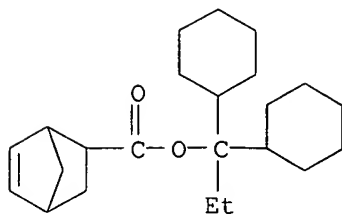
CRN 108-31-6
CMF C4 H2 O3



RN 691390-56-4 USPATFULL
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester, polymer with 2,5-furandione and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

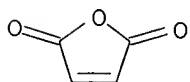
CM 1

CRN 691390-41-7
CMF C23 H36 O2



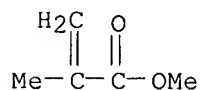
CM 2

CRN 108-31-6
CMF C4 H2 O3



CM 3

CRN 80-62-6
CMF C5 H8 O2

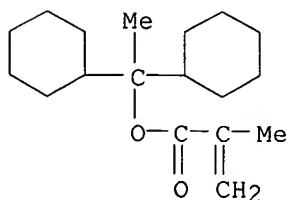


IT 615567-79-8P 691390-37-1P 691390-39-3P
691390-40-6P 691390-41-7P

(preparation of chemical amplified polymer having pendant group with dicyclohexyl for photoresist composition)

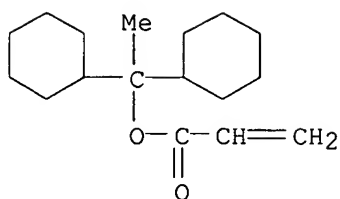
RN 615567-79-8 USPATFULL

CN 2-Propenoic acid, 2-methyl-, 1,1-dicyclohexylethyl ester (9CI) (CA INDEX NAME)

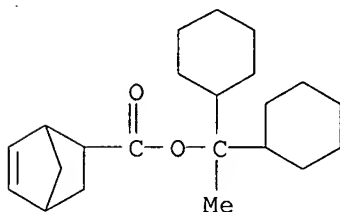


RN 691390-37-1 USPATFULL

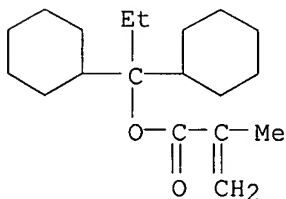
CN 2-Propenoic acid, 1,1-dicyclohexylethyl ester (9CI) (CA INDEX NAME)



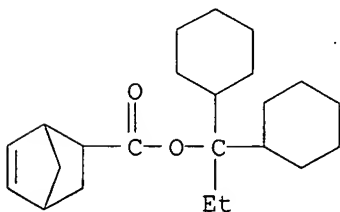
RN 691390-39-3 USPATFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester
(9CI) (CA INDEX NAME)

RN 691390-40-6 USPATFULL

CN 2-Propenoic acid, 2-methyl-, 1,1-dicyclohexylpropyl ester (9CI) (CA INDEX
NAME)

RN 691390-41-7 USPATFULL

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester
(9CI) (CA INDEX NAME)

=> fil reg

FILE 'REGISTRY' ENTERED AT 07:13:19 ON 03 JAN 2007

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DICTIONARY FILE UPDATES: 2 JAN 2007 HIGHEST RN 916646-22-5

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<http://www.cas.org/ONLINE/UG/regprops.html>

=> => d ide can tot 142

L42 ANSWER 1 OF 21 REGISTRY .COPYRIGHT 2007 ACS on STN

RN 691390-56-4 REGISTRY

ED Entered STN: 10 Jun 2004

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester, polymer with 2,5-furandione and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

MF (C23 H36 O2 . C5 H8 O2 . C4 H2 O3)x

CI PMS

PCT Polyacrylic, Polyether, Polyvinyl

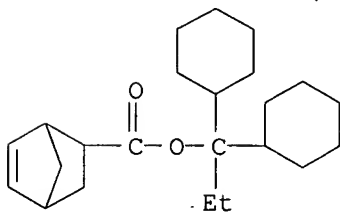
SR CA

LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 691390-41-7

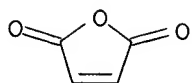
CMF C23 H36 O2



CM 2

CRN 108-31-6

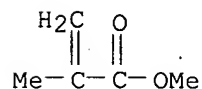
CMF C4 H2 O3



CM 3

CRN 80-62-6

CMF C5 H8 O2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 2 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN

RN 691390-55-3 REGISTRY

ED Entered STN: 10 Jun 2004

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester, polymer with 2,5-furandione and 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

MF (C23 H36 O2 . C6 H10 O3 . C4 H2 O3)x

CI PMS

PCT Polyacrylic, Polyether, Polyvinyl

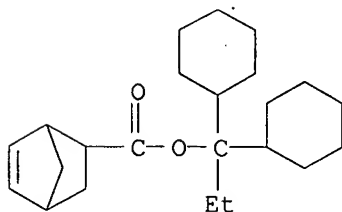
SR CA

LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 691390-41-7

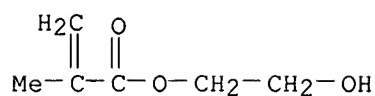
CMF C23 H36 O2



CM 2

CRN 868-77-9

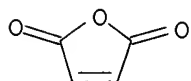
CMF C6 H10 O3



CM 3

CRN 108-31-6

CMF C4 H2 O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 3 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN

RN 691390-54-2 REGISTRY

ED Entered STN: 10 Jun 2004

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester, polymer with 2,5-furandione and 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

MF (C23 H36 O2 . C4 H6 O2 . C4 H2 O3)x

CI PMS

PCT Polyacrylic, Polyether, Polyvinyl

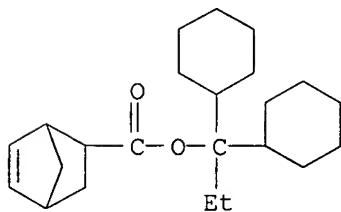
SR CA

LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 691390-41-7

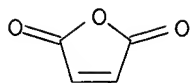
CMF C23 H36 O2



CM 2

CRN 108-31-6

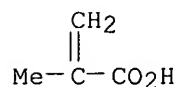
CMF C4 H2 O3



CM 3

CRN 79-41-4

CMF C4 H6 O2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 4 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN

RN 691390-53-1 REGISTRY

ED Entered STN: 10 Jun 2004

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester, polymer with 2,5-furandione and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

MF (C22 H34 O2 . C5 H8 O2 . C4 H2 O3)x

CI PMS

PCT Polyacrylic, Polyether, Polyvinyl

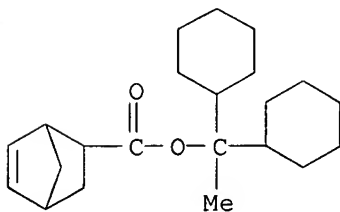
SR CA

LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 691390-39-3

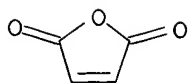
CMF C22 H34 O2



CM 2

CRN 108-31-6

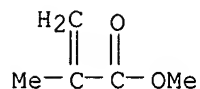
CMF C4 H2 O3



CM 3

CRN 80-62-6

CMF C5 H8 O2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 5 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN

RN 691390-52-0 REGISTRY

ED Entered STN: 10 Jun 2004

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester,
polymer with 2,5-furandione and 2-hydroxyethyl 2-methyl-2-propenoate (9CI)
(CA INDEX NAME)

MF (C22 H34 O2 . C6 H10 O3 . C4 H2 O3)x

CI PMS

PCT Polyacrylic, Polyether, Polyvinyl

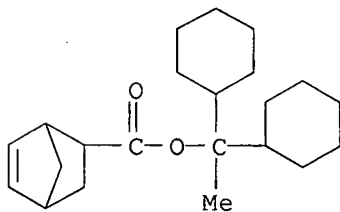
SR CA

LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 691390-39-3

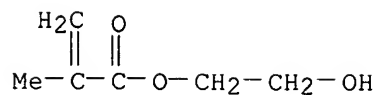
CMF C22 H34 O2



CM 2

CRN 868-77-9

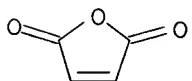
CMF C6 H10 O3



CM 3

CRN 108-31-6

CMF C4 H2 O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 6 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN

RN 691390-51-9 REGISTRY

ED Entered STN: 10 Jun 2004

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester, polymer with 2,5-furandione and 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

MF (C22 H34 O2 . C4 H6 O2 . C4 H2 O3)x

CI PMS

PCT Polyacrylic, Polyether, Polyvinyl

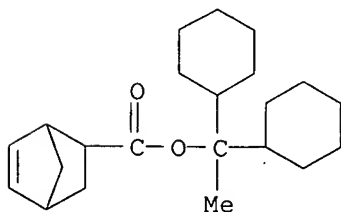
SR CA

LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 691390-39-3

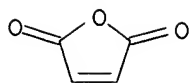
CMF C22 H34 O2



CM 2

CRN 108-31-6

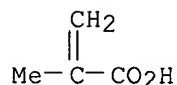
CMF C4 H2 O3



CM 3

CRN 79-41-4

CMF C4 H6 O2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 7 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN

RN 691390-50-8 REGISTRY

ED Entered STN: 10 Jun 2004

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, methyl ester, polymer with
1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX
NAME)

MF (C18 H30 O2 . C9 H12 O2 . C4 H2 O3)x

CI PMS

PCT Polyacrylic, Polyether, Polyvinyl

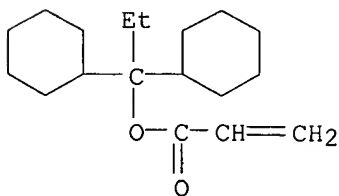
SR CA

LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 691390-47-3

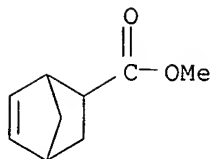
CMF C18 H30 O2



CM 2

CRN 6203-08-3

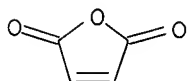
CMF C9 H12 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 8 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN

RN 691390-49-5 REGISTRY

ED Entered STN: 10 Jun 2004

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-hydroxyethyl ester, polymer with 1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

MF (C18 H30 O2 . C10 H14 O3 . C4 H2 O3)x

CI PMS

PCT Polyacrylic, Polyether, Polyvinyl

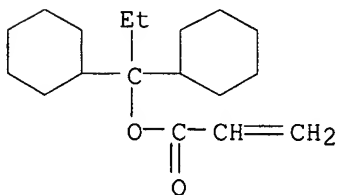
SR CA

LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 691390-47-3

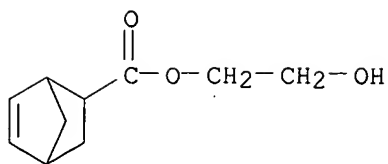
CMF C18 H30 O2



CM 2

CRN 37503-42-7

CMF C10 H14 O3



CM 3

CRN 108-31-6

CMF C4 H2 O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 9 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN

RN 691390-48-4 REGISTRY

ED Entered STN: 10 Jun 2004

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, polymer with
1,1-dicyclohexylpropyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX
NAME)

MF (C18 H30 O2 . C8 H10 O2 . C4 H2 O3)x

CI PMS

PCT Polyacrylic, Polyether, Polyvinyl

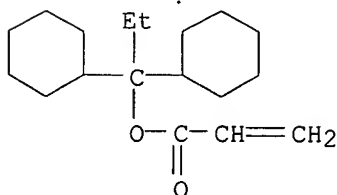
SR CA

LC STN Files: CA, CAPLUS, USPATFULL

CM 1

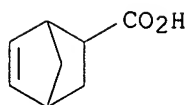
CRN 691390-47-3

CMF C18 H30 O2



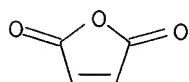
CM 2

CRN 120-74-1
CMF C8 H10 O2



CM 3

CRN 108-31-6
CMF C4 H2 O3

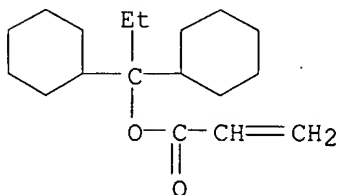


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 10 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN
RN 691390-47-3 REGISTRY
ED Entered STN: 10 Jun 2004
CN 2-Propenoic acid, 1,1-dicyclohexylpropyl ester (9CI) (CA INDEX NAME)
MF C18 H30 O2
CI COM
SR CA



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

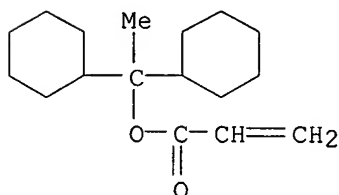
L42 ANSWER 11 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN
RN 691390-46-2 REGISTRY
ED Entered STN: 10 Jun 2004
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, methyl ester, polymer with
1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX
NAME)
MF (C17 H28 O2 . C9 H12 O2 . C4 H2 O3)x
CI PMS

PCT Polyacrylic, Polyether, Polyvinyl
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 691390-37-1

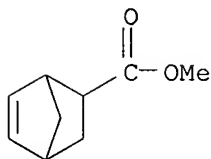
CMF C17 H28 O2



CM 2

CRN 6203-08-3

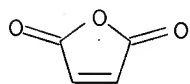
CMF C9 H12 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 12 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN

RN 691390-45-1 REGISTRY

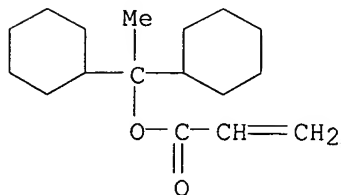
ED Entered STN: 10 Jun 2004

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-hydroxyethyl ester, polymer
with 1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA
INDEX NAME)

MF (C17 H28 O2 . C10 H14 O3 . C4 H2 O3)x
CI PMS
PCT Polyacrylic, Polyether, Polyvinyl
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

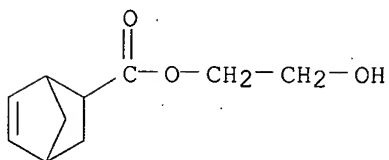
CM 1

CRN 691390-37-1
CMF C17 H28 O2



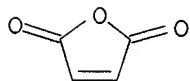
CM 2

CRN 37503-42-7
CMF C10 H14 O3



CM 3

CRN 108-31-6
CMF C4 H2 O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

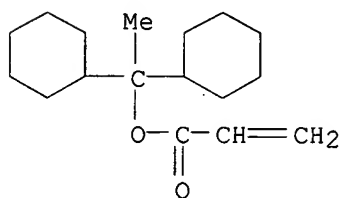
L42 ANSWER 13 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN
RN 691390-44-0 REGISTRY
ED Entered STN: 10 Jun 2004
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, polymer with

1,1-dicyclohexylethyl 2-propenoate and 2,5-furandione (9CI) (CA INDEX NAME)

MF (C17 H28 O2 . C8 H10 O2 . C4 H2 O3)x
CI PMS
PCT Polyacrylic, Polyether, Polyvinyl
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

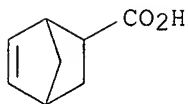
CM 1

CRN 691390-37-1
CMF C17 H28 O2



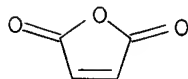
CM 2

CRN 120-74-1
CMF C8 H10 O2



CM 3

CRN 108-31-6
CMF C4 H2 O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

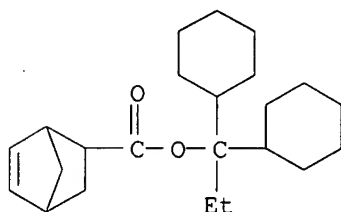
L42 ANSWER 14 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN
RN 691390-43-9 REGISTRY
ED Entered STN: 10 Jun 2004
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester,

polymer with 2,5-furandione (9CI) (CA INDEX NAME)
MF (C23 H36 O2 . C4 H2 O3)x
CI PMS
PCT Polyother, Polyvinyl
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 691390-41-7

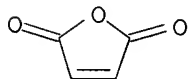
CMF C23 H36 O2



CM 2

CRN 108-31-6

CMF C4 H2 O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

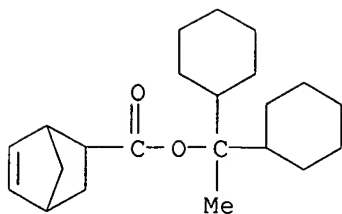
REFERENCE 1: 140:431398

L42 ANSWER 15 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN
RN 691390-42-8 REGISTRY
ED Entered STN: 10 Jun 2004
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester,
polymer with 2,5-furandione (9CI) (CA INDEX NAME)
MF (C22 H34 O2 . C4 H2 O3)x
CI PMS
PCT Polyother, Polyvinyl
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

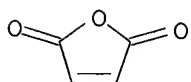
CM 1

CRN 691390-39-3

CMF C22 H34 O2



CM 2

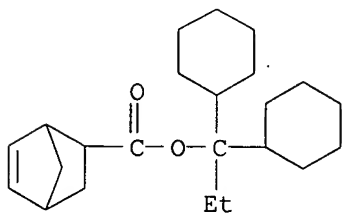
CRN 108-31-6
CMF C4 H2 O3

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 16 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN
RN 691390-41-7 REGISTRY
ED Entered STN: 10 Jun 2004
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylpropyl ester
(9CI) (CA INDEX NAME)
MF C23 H36 O2
CI COM
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



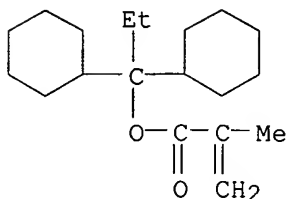
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 17 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN

RN 691390-40-6 REGISTRY
 ED Entered STN: 10 Jun 2004
 CN 2-Propenoic acid, 2-methyl-, 1,1-dicyclohexylpropyl ester (9CI) (CA INDEX NAME)
 MF C19 H32 O2
 SR CA
 LC STN Files: CA, CAPLUS, USPATFULL

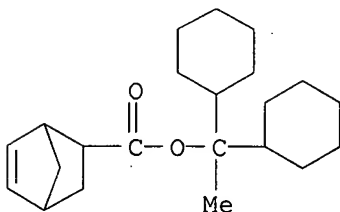


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 18 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 691390-39-3 REGISTRY
 ED Entered STN: 10 Jun 2004
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dicyclohexylethyl ester (9CI) (CA INDEX NAME)
 MF C22 H34 O2
 CI COM
 SR CA
 LC STN Files: CA, CAPLUS, USPATFULL



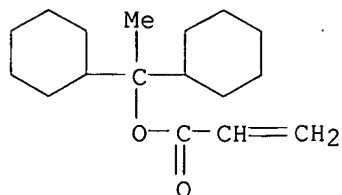
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 19 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 691390-37-1 REGISTRY
 ED Entered STN: 10 Jun 2004
 CN 2-Propenoic acid, 1,1-dicyclohexylethyl ester (9CI) (CA INDEX NAME)
 MF C17 H28 O2

CI COM
 SR CA
 LC STN Files: CA, CAPLUS, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

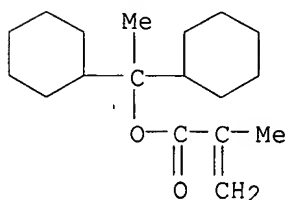
1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:431398

L42 ANSWER 20 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 615567-80-1 REGISTRY
 ED Entered STN: 12 Nov 2003
 CN 2-Propenoic acid, 2-methyl-, 1,1-dicyclohexylethyl ester, homopolymer
 (9CI) (CA INDEX NAME)
 MF (C18 H30 O2)x
 CI PMS
 SR CA
 LC STN Files: CA, CAPLUS

CM 1

CRN 615567-79-8
 CMF C18 H30 O2



1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:343474

L42 ANSWER 21 OF 21 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 615567-79-8 REGISTRY
 ED Entered STN: 12 Nov 2003
 CN 2-Propenoic acid, 2-methyl-, 1,1-dicyclohexylethyl ester (9CI) (CA INDEX NAME)
 MF C18 H30 O2
 CI COM
 SR CA

L17 E KIM NAME/AU
 343 S E4
 E KIM J/AU
 L18 948 S E3
 L19 1705 S E14-E18
 E KIM JAE/AU
 L20 16 S E3
 L21 46 S E75
 L22 285 S E111
 E KIM JAEH/AU
 L23 56 S E18
 E DEOG/AU
 E DONGJIN/PA,CS
 L24 165 S E29-E35
 L25 194 S E3,E4
 E DONG JIN/PA,CS
 L26 16 S E5-E41
 SEL RN L1

FILE 'REGISTRY' ENTERED AT 06:56:03 ON 03 JAN 2007

L27 26 S E1-E26
 L28 STR
 L29 50 S L28
 L30 14086 S L28 FUL
 SAV TEMP L30 CHU533/A
 L31 140 S L30 AND 103.10/RID
 L32 STR L28
 L33 0 S L32 SAM SUB=L30
 L34 11 S L32 FUL SUB=L30
 SAV L34 CHU533A/A
 L35 2 S L34 NOT L27
 L36 11 S L34,L35
 L37 STR L32
 L38 0 S L37 SAM SUB=L31
 L39 0 S L37 SAM SUB=L30
 L40 10 S L37 FUL SUB=L30
 SAV L40 CHU533B/A
 L41 10 S L40 AND L31
 L42 21 S L36,L41
 SAV L42 CHU533C/A
 L43 124 S L31 NOT L42

FILE 'HCAOLD' ENTERED AT 07:06:27 ON 03 JAN 2007

L44 0 S L42

FILE 'HCAPLUS' ENTERED AT 07:06:31 ON 03 JAN 2007

L45 2 S L42
 L46 1 S L45 AND L1-L26
 L47 2 S L45,L46

FILE 'REGISTRY' ENTERED AT 07:07:43 ON 03 JAN 2007

L48 3 S L27 AND CL/ELS
 L49 2 S L48 NOT MG/ELS
 L50 STR L32
 L51 13 S L50 SAM SUB=L30
 L52 3 S L50 CSS SAM SUB=L30
 L53 23 S L50 CSS FUL SUB=L30
 SAV L53 CHU533D/A

FILE 'HCAPLUS' ENTERED AT 07:09:58 ON 03 JAN 2007

L54 8470 S L49
L55 27 S L53
L56 1 S L54 AND L55
L57 2 S L47,L56
SEL RN L57 2

L58 FILE 'REGISTRY' ENTERED AT 07:10:28 ON 03 JAN 2007
61 S E27-E87

L59 FILE 'USPATFULL' ENTERED AT 07:11:13 ON 03 JAN 2007
1 S L42

L60 FILE 'HCAPLUS, USPATFULL' ENTERED AT 07:11:30 ON 03 JAN 2007
3 DUP REM L57 L59 (0 DUPLICATES REMOVED)

FILE 'REGISTRY' ENTERED AT 07:11:42 ON 03 JAN 2007

FILE 'HCAPLUS' ENTERED AT 07:12:29 ON 03 JAN 2007

FILE 'USPATFULL' ENTERED AT 07:12:52 ON 03 JAN 2007

FILE 'REGISTRY' ENTERED AT 07:13:19 ON 03 JAN 2007

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